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A Bicentennial Underscores Trends in Medical Research

COLUMBIA UNIVERSITY is celebrating the 200th anniversary of its medical school, the College of Physicians and Surgeons. It boasts of having graduated the first American M.D., in 1770, thereby nosing out the University of Pennsylvania, whose medical school had been organized two years earlier.

Columbia has always emphasized the mutually supporting functions of research, education and patient care. Most appropriately, it marked the anniversary with a symposium on genetics and development intended to achieve some perspective on the standing of molecular biology in its present transition from fundamental science to medical applications.

In fact, only a few of the participants in this symposium were medically trained and fewer still have any immediate contact with patients. In a sense, my own career at Columbia symbolizes the changing pattern of medical research during the past two decades, a period that coincides with the emerging dominance of the National Institutes of Health as the principal vehicle of support of that research in the United States.

I ENTERED Columbia Medical School in 1944, having just graduated from the undergraduate College. I was already fascinated by the problem of how tissue growth is controlled. A good example of this is the sudden spurt of growth of the remainder of a rat's liver when half of it is surgically removed.

At that time, however, medical students were not usually encouraged to divert their energies from anatomical dissections and pathological slides to independent research, and the project had to be dropped. In fact, hindsight today suggests that it was premature, too difficult to be fruitfully attacked by the then existing methods. Instead, I eagerly responded to an opportunity to continue research on genetics of microbes with the late Prof. Francis J. Ryan in his laboratory on the main Columbia campus.

That research led eventually to my dropping out of medical studies and to an association with Prof. E. L. Tatum at Yale, and, soon afterward, to our discovery of sexual processes in bacteria. One could even argue that the most effective way to study the growth of the liver or brain during the past 20 years was to

turn away from these tissues and use the time to develop our insights into fundamental cell processes. As many speakers at the symposium emphasized, it is time now to return to the more difficult problems of tissue biology.

A SPECIAL academic convocation also marked the bicentennial with the award of honorary degrees.